

The Taming of the (Elephant) Shrew: The Story of Navy Medicine's "Cairo to Capetown" Expedition of 1948

U.S. Navy Bureau of Medicine and Surgery

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On February 17, 1948, a Navy medical team embarked on a historic journey across the African Continent. Over a period of nine months they travelled in a caravan from Port Said, Egypt to Capetown, South Africa while collecting thousands of rare specimens, providing medical care to local populations and documenting tropical diseases through photograph and film. The scope and mission of what would be known as the "Cairo to Capetown Expedition," would never again be replicated in Navy annals.

The idea for a scientific expedition across Africa may not have been a priority for Navy Medicine in the era of post-war demobilization. But in August 1947, this new opportunity literally came knocking on doors of the Bureau of Medicine and Surgery (BUMED)—delivered by a charismatic explorer-to-be named Wendell Phillips.

Phillips had never before led a scientific expedition, but even at just 26-years old he was not lacking confidence in his own ability to do so. In 1947 he planned what was to be the largest American-led paleontological and archeological expedition across Africa. Equipped with a bachelor's degree in paleontology from UC Berkeley, a glib manner, and a hearty supply of chutzpah, Phillips was not only able to convince his alma mater to back this expedition but he persuaded the Shell Oil Company to donate 50,000 gallons of oil, General Motors to donate ten Chevy Sedans, and Colt Patent Firearms to contribute new guns. He recruited Charles Camp, Henry Field and Louis Leakey as expedition members (even though each were suspicious of the young man's motives and thought him more a "promoter" than scientist). Phillips had also befriended Fleet Adm. Chester Nimitz, then serving as Chief of Naval Operations. Nimitz promised Phillips a ship to transport the explorers and directed him to BUMED to procure medical support.

When Rear Adm. H. Lamont Pugh, Navy Deputy Surgeon General, met with Phillips he was immediately captivated by his proposal. "He was the most agile talker to whom I ever had listened," Pugh recalled.

For Admiral Pugh this expedition afforded Navy Medicine an opportunity to expand its knowledge of indigenous diseases that could affect military personnel and collect teaching specimens for the Naval Medical School (NDS) and Navy Medical Research Institute (NMRI). As Pugh explained, "Therefore realizing that here was a golden opportunity for Navy [Medicine] to obtain some badly needed information, I prevailed upon the leader of the expedition, Mr. Wendell Phillips, to permit the Navy to send along, not only one doctor, but a research unit consisting of several doctors and specialists in sciences allied to medicine."

Admiral Pugh tasked Cmdr. (later Capt.) Julius Amberson to serve as the Navy unit's officer-in-charge and assemble a team. By 1947, Amberson was Navy Medicine's "known quantity" for special missions like these. The mining engineer-turned preventive medicine physician had led Navy epidemiology teams through Egypt, Iraq, India, Kenya and South Africa during World War II and supported the historic U.S. medical survey of bituminous coal mines in 1946.

Amberson recruited physician Cmdr. Rodman Wilson (Medical Corps, USNR), parasitologist Cmdr. Trenton



Ruebush (MSC, USN), preventive medicine technician HMC Deaner Lawless, photographer AF2 Harley Cope, motion picture photographer MSgt. Charles Evans, motor transportation specialists Capt. G.G. Edwards and MSgt James Houle of the Marine Corps and two civilian scientists—Dr. Harry Hoogstraal, an entomologist with the Field Museum in Chicago, Illinois and Dr. Ernst Schwarz, a zoologist with the Smithsonian Institution. Later, they were joined by a British Army mechanic, an Egyptian chef from the famed Shepheard's hotel in Cairo, and Rev. Gordon Fournier who served as the expedition's chaplain, translator and public relations officer. Amberson dubbed his team the "Navy Medical Science Group."

From the Naval Medical Supply Depot in Brooklyn, N.Y., Amberson secured medical and surgical supplies, a portable X-Ray outfit, a gasoline motor generator for lights and power, and a set of instruments for ophthalmology. He obtained heavy duty trucks from the Naval Base New Orleans, Louisiana, and two jeeps with radio transceivers from the Naval Gun Factory in Washington, D.C.

Over the ensuing months, Amberson and his team consulted with noted experts at natural history museums across the United States and overseas to help scope out the mission. They devised a plan where they would travel a minimum of 150 miles per week through Egypt, Sudan, Belgian Congo (Democratic Republic of Congo), Somaliland (Somalia), Uganda, Kenya, Tanganyika (Tanzania) including Zanzibar, Northern Rhodesia (Zambia), Southern Rhodesia (Zimbabwe), Mozambique, and South Africa. Amberson outlined the mission as follows: to provide medical supplies and support to the greater expedition, obtain information on topographical layout, present sanitary conditions, diseases and their carriers, and collect documentary evidence. This work was governed by two basic principles: Navy medical surveys were to be made in areas where gaps in knowledge existed and the Navy team would have input on planning routes and the timing of stops.

After arriving in Port Said, the Navy Science Group met the UC Berkeley team in Kom Oshim (about an hour outside of Cairo) on February 7th, 1948 to discuss the route and objectives. They agreed that Phillips and part of his team would join the Navy Science Group through Sudan and part of East Africa.

Over the first weeks the expedition proceeded south along the Nile stopping along ancient villages, and visiting old temple ruins in Luxor with Henry Field. On March 7th, they arrived in Wadi Halfa, Sudan where they set up a laboratory for zoological research and travelled to an isolation hospital where they took patient x-rays for a local physician.

At sundown on March 8th, a gun was accidentally discharged injuring Chief Deaner Lawless. Lawless was found bleeding profusely from the left side of his face and it was believed that he had been shot through the head. Even Lawless thought his end was near and asked for last rites from Father Fournier before the wounds were deemed superficial. Amberson treated the wounds and also removed a piece of metal from the Chief's eye.

In the town of Abu Hamed, on the right bank of the Nile, the Navy Group set up a clinic where they treated everything from tonsillitis, corneal abrasions to vitamin deficiencies, trachoma and leprosy. They remained in Sudan through May, visiting ancient Kushite temples, villages along the Blue Nile impacted by schistosomiasis, malaria and tropical ulcers, and meeting distinguished medical personnel and missionaries.

In the Sudanese towns of Bor and Juba, they treated smallpox which was epidemic, studied the incidence of blackwater fever, and made ward rounds at local hospitals. And in Eastern Equatoria (South Sudan), the Navy Group sought out the elusive 4-toed elephant shrew (named for its elephant-like proboscis). These chipmunk-like creatures were known to harbor a strain of malaria-type parasite similar to human malaria. Seeing the shrew as a potential test-subject for anti-malarial drugs, the Navy Group, with the help of local children collected, some 250 shrews to ship back to NMRI for study.

Throughout the expedition, the Navy Group saw many cases of African Trypanosomiasis or sleeping sickness in various stages, which they documented. Transmitted by the tsetse fly—a large biting insect that feeds on blood—the disease can lead to debility, sleep disorders, cognitive decline and ultimately organ failure, if left untreated. Amberson and his team sought to understand the prevention and control of the disease and studied the bionomics of the tsetse fly.

Crossing into the Belgian Congo in May, they met with Chief Zenaga of the Azande tribe. The chief had struggled for years with pain which they was diagnosed as rheumatoid arthritis. They supplied him with 500 tablets of aspirin and instructed him to take two a day. At the Inland Africa Mission in Ava, Belgian Congo they conducted hernia repair surgeries for area locals.

From the end of May through August, the Navy Group worked out of Kenya where they visited the Pleistocene diggings of Dr. Leakey, visited Masai villages, and documented cases of Rift Valley Fever, bubonic plague, malaria, yaws, nutritional diseases, and collected many specimens of ticks and flukes.

By June, communication between the Navy and Wendell Phillips was breaking down. In a letter to Admiral Pugh, dated June 3rd, Amberson wrote: "the Navy group has encountered innumerable difficulties with the California leader which impede its activities. These difficulties are due to incompetence and poor cooperation on the part of leader Phillips and his administrative associates, and to continual nefarious practices which not only dissatisfy the personnel associated with the California agents, but make such a bad impression on local scientists and officials that it is embarrassing for us to be associated as we are." Admiral Pugh sent Capt. James Saperro (Medical Corps, USN), a noted tropical disease expert, to Nairobi to be his "eyes on the ground" and support the Navy Group. Seeing an impasse with Phillips, Saperro and Amberson negotiated a new agreement with UC Berkeley whereby the Navy Group became independent.

From July to August, the Navy Science Group travelled through Uganda, and Belgian Congo visiting Lake Victoria and Ripon Falls, local hospitals, the Yellow Fever Institute, and a leper colony. In late August 1948, the Navy Group travelled down the Great North Road through Tanganyika, Northern Rhodesia, Southern Rhodesia, and the Transvaal Province. They arrived in Capetown, South Africa on October 19th. At journey's end, the Navy Science Group amassed over 19,660 miles.

Postscript:

On October 22, 1948, Amberson, Ruebush, Cope, and Schwarz boarded USS Huntington and sailed to South America where they remained until December 1948. Saperro, Hoogstraal and Lawless remained in Africa for several more months travelling to Madagascar where they continued the mission of the Navy Science Group.

Throughout their nine-month trek from Egypt to South Africa, the Navy Science Group collected thousands of rare specimens, documented numerous tropical diseases, and treated hundreds of people in need of medical care. The specimens and documentary evidence collected was later shared with teaching and scientific institutions throughout the world for the benefit of medical education and global health research. And Amberson later adapted this material for a global health course at the Naval Medical School.

Using the 250 specimens of elephant shrew that were sent back, NMRI was able to study the "taxonomic and evolutionary" status of malaria parasites. They ultimately determined that the shrew's malaria parasite had a peculiar cyclic course, but had little value for treatment of human malaria.

After returning from Africa, Wendell Phillips immediately began charting his next expedition. In 1949, he embarked on a journey through Saudi Arabia and present day Yemen searching for the fabled home of the "Queen of Sheba." He recounted these adventures in *Qataban and Sheba: Exploring the Ancient Kingdoms on the Biblical Spice Routes of Arabia* (1955). In later years he started his own oil company and, at the time of his death in 1975, he was the largest individual holder of oil concessions in the world. In 2014, the Smithsonian's Sackler Gallery opened the exhibition dedicated to Phillips' archeological work in Yemen, "Unearthing Arabia: The Archaeological Adventures of Wendell Phillips."

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